

## Unit 3 – Outcome 1

### Chapters 1 & 2

#### Key knowledge

1. Types, purposes and functionality of websites that support information exchange within online communities
  - Define efficiency & effectiveness
  - Explain the following types of websites including their purpose and functionality: blogs, chat rooms, forums, social networking & wikis
2. Types of networks and the functions of their key hardware and software components
  - What is a network? What are the advantages to an organisation of having a network?
  - What is the internet? Contrast this with an intranet.
  - Explain how different networks can be classified according to size, network architecture, protocols and communication media.
  - Give examples of and explain the role of different network software.
  - Give examples of and explain the role of different network hardware.
3. Capabilities of wired and wireless communications technology to support local and remote communications
  - Define wired and wireless communications technology.
  - Contrast wired v wireless as a means of communication.
  - Describe the various wired options, including their advantages and disadvantages.
  - Describe the various wireless options, including their advantages and disadvantages.
4. Hardware and software requirements for setting up websites on servers, including operating system, web server software, protocols, security and proxy servers
  - Outline the various hardware requirements for setting up websites (see 4 above)
  - Outline the various software requirements for setting up websites (see 4 above)
  - Define authoring software.
  - Explain the use of cross-platform web software
  - Why is network security important
  - Discuss the characteristics of the various network security devices and procedures available
5. Stages of the problem-solving methodology
  - Define the problem-solving methodology
  - What is the purpose of using a structured approach to problem-solving
  - Outline each of the stages in the problem-solving process, including the purpose of the stage and what procedures would be carried out.
6. Types and purposes of online communities including social, work-based, project/interest-based that support the purposes of collaboration, knowledge sharing and collective identity
  - list and explain the different types of online communities
  - describe the purposes of different online communities

7. Needs of online community members that affect the nature of their websites, including access requirements (open or closed)
  - Describe the characteristics of online communities
  - Distinguish between open and closed communities
  - Distinguish between synchronous and asynchronous tools that facilitate information exchange
8. Non-technical constraints on website solutions, including privacy, copyright and human rights requirements and social online protocols
  - How do constraints impact on the problem-solving process? List some technical constraints.
  - Define social online protocols
  - Explain each of the other non-technical constraints listed.
9. Design elements that influence the functionality and appearance of websites
  - Define design elements?
  - Distinguish between design elements related to appearance and those related to functionality.
  - List and explain each of the design elements. Give an example of each for when designing a website.
  - Define information architecture. What is its objective?
10. Design tools for representing website solutions
  - Define design tools.
  - Which design tools are most suited to web design?
11. Functions of web authoring software used to manipulate data
  - Explain the use of each of the following web authoring software functions: cascading style sheets, edit & format content, links (absolute & relative, internal & external), navigation, buttons, screen layout, tagging (metadata tags & alt tags), forms, incorporating images & sounds.
12. Manual and electronic validation techniques
  - What is the purpose of validation techniques when creating websites
  - Give examples of manual and electronic validation techniques that could be used when creating a website.
13. Formats and conventions applied to websites in order to improve their effectiveness for intended users
  - Give examples of different formats that could be used to present data on a website. For each format, list some conventions that relate to that format.
  - What is the purpose of adhering to accepted conventions?
14. Methods and techniques for testing that the solutions perform as intended.
  - Define testing techniques
  - What are some of the features that a prototype website should be tested for?
  - Explain some testing techniques that could be used.
  - What is the advantage of using a testing table?